Name:

p1106: Solve by factoring (v1)

1. Solve the equation

$$x^2 - 5x + 4 = 0$$

$$(x-4)(x-1) = 0$$
$$x = 1$$
$$x = 4$$

2. Solve the equation

$$x^2 + 8x + 15 = 0$$

$$(x+3)(x+5) = 0$$
$$x = -5$$
$$x = -3$$

3. Solve the equation

$$6x^2 - 12x + 54 \;=\; 5x^2 + 2x + 9$$

$$x^2 - 14x + 45 = 0$$
$$(x-9)(x-5) = 0$$
$$x = 5$$
$$x = 9$$

4. Solve the equation

$$5x^2 + 2x - 33 \;=\; 4x^2 + 4x - 9$$

$$x^2 - 2x - 24 = 0$$
$$(x+4)(x-6) = 0$$
$$x = 6$$
$$x = -4$$

5. Solve the equation

$$8x^2 + 21x + 87 \;=\; 7x^2 + 3x + 6$$

$$x^2 + 18x + 81 = 0$$
$$(x+9)(x+9) = 0$$
$$x = -9$$
$$x = -9$$

6. Solve the equation

$$7x^2 + 40x - 12 = 0$$

$$(7x - 2)(x + 6) = 0$$
$$x = -6$$
$$x = \frac{2}{7}$$

7. Solve the equation

$$2x^2 + 21x + 40 = 0$$

$$(2x + 5)(x + 8) = 0$$
$$x = -8$$
$$x = \frac{-5}{2}$$

8. Solve the equation

$$16x^2 - 64x - 24 \;=\; 5x^2 - x - 6$$

$$11x^2 - 63x - 18 = 0$$
$$(11x + 3)(x - 6) = 0$$
$$x = 6$$
$$x = \frac{-3}{11}$$

9. Solve the equation

$$4x^2 - 2x - 4 \;=\; 2x^2 - 7x - 7$$

$$2x^2 + 5x + 3 = 0$$
$$(2x + 3)(x + 1) = 0$$
$$x = -1$$
$$x = \frac{-3}{2}$$

10. Solve the equation

$$12x^2 - 17 \;=\; 7x^2 - 3x - 3$$

$$5x^2 + 3x - 14 = 0$$
$$(5x - 7)(x + 2) = 0$$
$$x = -2$$
$$x = \frac{7}{5}$$